

North American Drought Monitor – May 2005

Canada: In British Columbia, May was warm (generally 1-3 degrees C or 2 to 6 degrees F above normal), with variable precipitation. Kelowna and Princeton both received about one half of normal May rainfall; Penticton received 80 percent of normal. Cranbrook and Creston, two of the driest locations in BC over the winter, received 49 mm (1.93 inches) and 69 mm (2.72 inches) of rain during May, respectively (114 percent and 123 percent of normal). Vancouver Island and the South Coast generally experienced above-normal May rainfall. Rivers in the above noted areas have been forecast to experience only 40-65% of normal May-August runoff. May rainfall was not sufficient to increase those runoff forecasts. A number of streams in the south interior have become low very early in the spring. Vancouver Island and the South Coast had less than one-half of normal snow water at their peak in April. With the warm weather in late April and May, almost all the snow has melted. Stream flow in some gauged streams (e.g., Chemainus, Oyster) dropped to near 20-yr low flows in early May. However, moderate sustained rain in mid-May brought water levels up to near long-term median values. Since then, flows have dropped again, reflecting the absence of runoff contribution from snowmelt. On Vancouver Island, the Chemainus, Oyster and Browns Rivers are near 10-yr lows. Drought conditions rated between abnormally dry (DO) and severe (D2) in southern regions of the province.

In Alberta, a lack of general rainfall had many producers concerned about the increasing dryness in the region, resulting in the need for irrigation. Alberta pastures and tame hay were rated as 14 percent poor, 30 percent fair, 49 percent good, and 7 percent excellent. Surface moisture is rated as 13 percent poor, 24 percent fair, 35 percent good, and 28 percent excellent, while rating of sub-surface moisture is 13 percent poor, 30 percent fair, 45 percent good, and 12 percent excellent. Surface moisture, hay and pastures rated poor in about 30 percent of the southern and central regions.

In Saskatchewan, more than 80 percent of reporters rated topsoil moisture as adequate. Moisture is sufficient on pastures, but heat is required for good growth. Water levels and flows are at well above-normal levels across northern Saskatchewan due to the well above-normal snowpack and heavy precipitation during the latter portion of May over most of this area of the province. Flows in the rivers are at well above normal levels, with most rivers still rising. Flows on the Churchill River are currently the second highest in recorded history (since 1963). Inflows into Reindeer Lake are also at well above-normal levels. Reindeer Lake is expected to rise to near its full supply level (FSL) by late summer, despite planned spills past the Island Falls generating station over much of the summer.

On the Saskatchewan River system, flows on the North Saskatchewan River rose quickly in late May as a result of heavy rains in the foothills region of the Alberta portion of the basin. In the South Saskatchewan River Basin, very dry conditions in the headwaters of the basin prevailed throughout the month of May, resulting in only a minimal early mountain runoff in the basin.

There were no drought issues in Manitoba. Hot, windy weather was needed for many regions of Manitoba to get their crops planted.

Most stations in southern Ontario reported below 60 percent of average precipitation during the month of May. Conditions ranged from near average to moderate drought (D1). Millhaven Creek near Millhaven and the Bonnechere River near Castleford remained above the monthly mean. The remaining stations fell below the mean but remained above the monthly minimum for May. All but three stations reported below 70 percent of average in northeast Ontario during May and conditions range from near average to below. Most stations reported above-average precipitation in northwest Ontario. The level of Lake Erie remains above average while the levels of Superior, Michigan-Huron and St. Clair are below average. Lake Ontario has fallen to its average level. Pasture growth has been slower than normal, with cool and dry conditions in much of the province

From a meteorological perspective, May was drier than average and cool across Quebec. Soil moisture was normal in most regions of Quebec with the exception of some locations that were excessive. Cool temperatures and frost caused some crop damage in mid May. In the Atlantic region, adequate or excessive moisture conditions prevail.

United States: Abnormally heavy rain and mountain snows alleviated short-term drought over much of the Northwest this month, with more than twice normal precipitation falling from southern Oregon into southern Idaho, and over 150 percent of normal precipitation dampening Washington, northern Oregon, and Wyoming. The persistent wetness since late March resulted in spring (March-May) being the second wettest such period in 111 years of record in the Northwest, according to preliminary data. Storms also dropped abundant rainfall over the northern Plains. Hot weather in the Southwest caused snowmelt flooding, and rivers in some Western lowlands, especially those downstream of abundant high-elevation snow packs, continued to run high at month's end. D1 to D2 drought remained evident from the Northwest eastward into Montana and Wyoming due largely to lingering long-term precipitation deficits, but soil moisture and pasture conditions continued to improve. As of early June, for example, USDA reported only 3 percent of Idaho farmland short topsoil moisture. In May, Boise, Idaho notched its seventh wettest month in more than 100 years of record-keeping. Drought further eased from Idaho eastward to the Dakotas and south to Nebraska during the first week of June, which saw widespread precipitation totals of 1 to 4 inches (25-100 mm) in this region, with locally higher amounts. This moisture further boosted soil moisture and reduced the wildfire threat, but brought flooding to Idaho, Montana, and North Dakota. Farther east, dryness and moderate drought (D0 and D1) intensified during May from the middle Mississippi Valley into the Great Lakes region, as many areas picked up less than one-half their normal rainfall. D1 became established from central Missouri to southwestern Lower Michigan and also spread from Oklahoma into Louisiana and into northeastern Arkansas and western Tennessee. Peoria, Illinois, experienced its second-driest May on record (0.69 inch, 17 mm). St. Louis, Missouri, reported its third-driest spring on record. It was the driest May on record in locations

such as Jonesboro, Arkansas (0.22 inch, 6 mm), and Jackson, Tennessee (0.42 inch, 11 mm). In northern Mississippi, Tupelo completed its second-driest May and third-driest spring. USDA rated early June topsoil moisture at 55 percent short in Michigan and 74 percent short in Illinois. In Texas, the lower Rio Grande Valley saw some moderate to severe drought persist, as January-May rainfall totaled just 35 percent of normal in Brownsville. In the Northeast, short-term dryness (D0) spread across parts of New York and Pennsylvania. It was the driest May on record in Syracuse. In Hawaii, warm, mostly dry weather persisted. Daily average temperatures were above normal on every day in May at locations such as Lihue, Kauai, and Hilo, on the Big Island. Honolulu reported its warmest May, breaking a record that had stood since 1970. Honolulu also set or tied 15 daily-record highs in a 25-day period from May 4-28. In addition, April-May rainfall totaled just 21 percent of normal in Kahului, Maui and 48 percent of normal in Honolulu. Abnormal dryness (D0) was present across most of Hawaii, with moderate drought (D1) introduced on the Big Island.

Mexico: May was another dry month across central and southern Mexico. The national Meteorological Service reported a monthly national average of 41.5 mm (1.63 inches), which is 4 percent above the 1941-2004 monthly average. A particular aspect of the May rainfall pattern over Mexico was the fact that rains concentrated over northern Mexico, including the Baja California peninsula, where May represents the driest time of the year. In contrast, western and southern Mexico, where the onset of the monsoon typically occurs at the end of May, experienced dry conditions and warmer than normal temperatures.

Because of the delay of the rainy season, abnormally dry conditions (D0) expanded across portions of the states of Jalisco, Michoacan, Mexico, Morelos and D. F. (Mexico City). Improvements based on the precipitation during May were made to the moderate drought (D1) over the southern half of Quintana Roo. No changes were detected over the region along the southern Gulf of Mexico, where the biggest precipitation departures for timescales of 6-, 9-, and 12-months still exist from central Veracruz through western Campeche states. The severe drought conditions in this particular region remain centered on Tabasco. There is a lot of concern regarding the delay of the rains in the central and southern part of the country. This condition is having an impact on agricultural activities.